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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,731	07/25/2003	Shinpei Okajima	SN-US035079	9684

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EXAMINER

BELLINGER, JASON R

ART UNIT	PAPER NUMBER
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3617

DATE MAILED: 06/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/626,731

Applicant(s)

OKAJIMA, SHINPEI

Examiner

Jason R. Bellinger

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

1. Claim 33 is directed a nonelected species of the invention (namely the nonelected species drawn to Figures 17-20). The Applicant elected the species drawn to Figures 1-8 and 10-12 without traverse in the paper filed 1 July 2004.

Accordingly, claim 33 is withdrawn from consideration as being directed to a non-elected invention.

Claim Objections

2. Claim 35 is objected to because of the following informalities: The claim has an incorrect status identifier. In the amendment filed 19 April 2005, the claim was indicated as being "(new)", however the claim should actually be identified as being --(Previously Presented)--, due to the fact that the claim was newly presented in the previous amendment filed 5 November 2004.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-9, 11, 13-31, and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altenburger in view of Minshall. In Figures 6-10, Altenburger shows a bicycle rim having an annular tire attachment portion adapted to have a tire 10 mounted

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thereon, and an annular spoke attachment portion 13, which is fixedly coupled to the tire attachment portion to form an annular hollow area 14, and includes a plurality of circumferential spaced spoke attachment openings, each having a central axis.

The attachment areas of the exterior surface of the spoke attachment portion are free of any through openings except for the spoke attachment openings. The spoke attachment portion 13 includes a pair of annular side sections that extends radially outwardly from an inner annular section to form a first substantially U-shaped cross-sectional shape.

The tire attachment portion includes a pair of annular tire support sections 11 and an annular bridge section 12 that extends therebetween to form a second substantially U-shaped cross-sectional shape in order to form the annular hollow area 14 together with the spoke attachment portion 13. The annular bridge section 12 is free of any openings except for a single valve opening.

The annular side sections (14-15) and inner annular section of the spoke attachment portion 11, and the annular tire support sections (24-25) and annular bridge section 23 of the tire attachment portion 10 are integrally formed together as a one-piece, unitary member.

The spoke attachment openings are formed in an inner annular section of the spoke attachment portion that forms an inner radial periphery of the rim, such that the central axes of the spoke attachment openings extend in a substantially radial direction of the rim. Each spoke attachment opening has an inner diameter that is configured and

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arranged to allow a spoke 30 to be adjustably and releasably coupled thereto (namely through spoke nipple 31).

Altenburger does not show a plurality of separate reinforcement members fixedly coupled to the spoke attachment portion at the spoke attachment openings to effectively increase the thickness of the spoke attachment portion. Minshall teaches the use of a plurality of separate reinforcement members **D** that are fixedly coupled to a spoke attachment portion at spoke attachment openings of a rim **A** to effectively increase the thickness of the spoke attachment portion. Each reinforcement member **D** is located entirely exteriorly of the spoke attachment portion, and include a through opening **d**² that is aligned with one of the spoke attachment openings.

Each reinforcement member **D** includes a projecting portion **d**³ extending inwardly from one of the spoke attachment openings in a radial direction to an end surface **d**¹ spaced radially inwardly of the exterior surface of the spoke attachment portion. A rim-facing surface **d** of the reinforcement member **D** overlies an attachment area of the exterior surface of the spoke attachment portion that surrounds a corresponding one of the spoke attachment openings.

Each of the through openings **d**² is substantially coincident with a respective spoke attachment opening when viewed from the central axis of the spoke attachment opening. Each reinforcement member **D** has a maximum overlapping dimension that overlaps the annular spoke attachment portion as measured from an outer peripheral edge to a respective spoke attachment opening. The maximum overlapping dimension

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is at least half as large as a maximum transverse dimension of the spoke attachment openings. Each reinforcement member **D** includes a rim-facing surface **d** that corresponds to a contour of the exterior surface of the spoke attachment portion.

While Minshall does not specify that each of the reinforcement members is welded or brazed to the spoke attachment portion around its outer periphery, it would have been obvious to one of ordinary skill at the time of the invention to weld or braze the reinforcement members to the rim in any manner that would create a permanent bond between the rim and reinforcement members, dependent upon time and materials available.

Each reinforcement member **D** has a symmetrical shape relative to a center plane of the rim **A** and to a center radial plane that is perpendicular to the center plane of the rim **A**. The overall circumferential dimension of the reinforcement members **D** is at least as large as the overall axial dimension thereof.

Each reinforcement member **D** has a base portion (**d**³- **d**⁴) with a first thickness, and a projecting portion **d**³ extending radially inwardly from the base portion (**d**³- **d**⁴), such that the projecting portion **d**³ has a second thickness that is at least twice the first thickness. The through opening **d**² of each reinforcement member **D** is formed in the projecting portion **d**³. The base portion (**d**³- **d**⁴) of each reinforcement member **D** includes a tapered section (namely the radially outer ends of the projecting portion **d**³) extending around the outer periphery thereof. Each of the through openings **d**² is substantially coincident with a respective one of the spoke attachment openings as viewed along the central axes of the spoke attachment openings.

The spoke attachment portion of the rim **A** has a substantially uniform radial thickness in an annular area where the reinforcement members **D** are fixed. Each reinforcement member **D** is a separate element from the rim **A**.

Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the rim of Altenburger with the reinforcement members taught by Minshall, for the purpose of reinforcing the rim at the spoke attaching openings, thus increasing the strength of the rim at the locations where localized stresses occur (namely where the spokes attach to the rim).

Altenburger as modified by Minshall does not show the spoke attachment openings of the spoke attachment portion and the through opening of each reinforcement member being threaded. However, one of ordinary skill in the art at the time of the invention would have found it obvious to provide threads in the spoke attachment openings of the spoke attachment portion and the through hole of each reinforcement member for the purpose of increasing the amount of surface area for securing the spokes to the rim, thus reducing the likelihood of spoke separation during operation, and to eliminate the need for the spoke nipple 31 (shown in Altenburger), thus reducing the number of parts of the assembly.

Altenburger as modified by Minshall also does not specify that the [spoke] attachment openings be formed after the reinforcement members are fixedly attached to the spoke attachment portion. However, one of ordinary skill in the art at the time of the invention would have found it obvious to form the attachment openings after the

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reinforcement members have been fixedly attached to the spoke attachment portion in order to maintain alignment of the attachment opening between the rim and the reinforcement members, thus reducing and/or eliminating any lateral stress on the spokes ends secured within the rim and reinforcement members.

5. Claims 12 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altenburger in view of Minshall as applied to claims 1-9, 11, 13-31, and 33-35 above, and further in view of Lacombe et al. Altenburger does not show the spoke attachment portion including a valve opening aligned with the single valve aperture of the bridge section.

Lacombe et al teaches the use of a bicycle rim 2 having an annular tire attachment portion 10 adapted to mount a tire 5 thereon, and an annular spoke attachment portion 11 fixedly coupled to the tire attachment portion 10 to form an annular hollow area. The spoke attachment portion 11 includes a pair of annular side sections (14-15) extending radially outwardly from an inner annular section to form a first substantially U-shaped cross-sectional shape.

The tire attachment portion 10 includes a pair of annular tire support sections (24-25) and an annular bridge section 23 that extends therebetween to form a second substantially U-shaped cross-sectional shape and form the annular hollow area together with the spoke attachment portion 11. The annular bridge section 23 is devoid of any openings except for a single valve opening. The spoke attachment portion 11 includes a valve opening aligned with the single valve aperture in the bridge section 23.

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Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to form the rim of Altenburger with a spoke attachment portion having a valve opening aligned with the single valve aperture in the bridge section, for the purpose of allowing the use of a tubeless pneumatic tire on the rim, thus improving the ride characteristics of the wheel.

Response to Arguments

6. Applicant's arguments with respect to claims 1-9 and 13-35 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 703-308-6298. The examiner can normally be reached on Mon - Thurs (9:00-4:30).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 703-308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason R Bellinger
Examiner
Art Unit 3617



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